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10/787,112	02/27/2004	Yasuyuki Mimatsu	TSM-35	5084

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EXAMINER

DOAN, TRANG T

ART UNIT PAPER NUMBER

2131

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,112

Applicant(s)

MIMATSU ET AL.

Examiner

Trang Doan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending in this application.

Claim Objections

2. Regarding claim 1, "a first network,, comprising", in line 8, is incorrect. The examiner interprets as "a first network, comprising". Appropriate correction is required.
3. Regarding claim 11, "second network:" is incorrect. The examiner interprets as "second network;". Appropriate correction is required.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 11/26/2003. It is noted, however, that applicant has not filed a certified copy of the 2003-395370 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1, 9-12 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Regarding claims 1, 9-12 and 16, the examiner confuses who or what obtains the access restriction information, information at a volume, and attribute information.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ofek et al. (US Patent 6598134) (hereinafter Ofek).

10. Regarding claim 1, a first step for obtaining access restriction information and information at a volume which are set up on each port that a first storage device has, through a second network (Ofek: see figure 1 items 12, 24 and 14: host requests access to old data storage system through new data storage system); a second step for obtaining attribute information including a port type and a status of utilization of each port that a second storage device has, from said second storage device through said second network (Ofek: see figure 2 and column 4 lines 38-64: data map/table contains parameters that maps the new data storage system to the old data storage system); a third step for selecting a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained in said second step (Ofek: see figure 1 and column 5 lines 11-19); and a fourth step for setting up, on a port of said second storage device which is selected in said third step, access

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restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained in said first step (Ofek: see figures 1 & 5 and column 5 lines 45-55 and column 6 lines 14-46).

11. Regarding claim 2, Ofek teaches wherein said third step selects a target port which is utilized for reception of an access request to a volume that said first storage device has from said host computer, and an initiator port which is utilized for transmission of an access request to a volume that said first storage device has from said second storage device, and said fourth step sets up, on a target port of said second storage device which is selected in said third step, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, and permits only an access request to access restriction information of said first storage device to which the volume is assigned from an initiator port of said second storage device which is selected in said third step (Ofek: see figures 1 & 5 and column 4 lines 38-64).

12. Regarding claim 3, Ofek teaches wherein said first step obtains access restriction information which is set up on each port that a first storage device has and information of a volume, from said first storage device through said second network (Ofek: see figures 1 & 2 and column 8 lines 6-17 and lines 28-53 and column 12 lines 59-67 and column 13 lines 1-22).

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13. Regarding claim 4, Ofek teaches wherein said first step specifies access restriction information which is set up on each port that a first storage device has and information of a volume, by obtaining information of a port of said host computer which is utilized for an access to a volume that said first storage device has and information of a port of said first storage device, from said host computer through said second network (Ofek: see figure 1 items 12, 24 and 14: host requests access to old data storage system through new data storage system).

14. Regarding claim 5, Ofek teaches a fifth step for changing a port of said first storage device which is associated with each mount point of a file system of said host computer and a volume which is assigned to the port, to a port of said second storage device which is utilized for an access to the volume and a volume which is defined on the port (Ofek: see figure 2).

15. Regarding claim 6, Ofek teaches wherein said first storage device sets up access restriction information on each port, by use of a first management table in which an information identifier of a volume and a source port or an access to be permitted are listed with a LUN unit with respect to each port, and said second storage device sets up access restriction information on each port, by use of a second management table in which a LUN and an identifier of a volume are listed with a group unit of source ports of an access to be permitted with respect to each port, and said first step obtains said first management table, and said fourth step prepares said second management table as to each port of said second storage device which is selected in said third step, on the basis of a listed content of said first management table which is obtained in said first

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step as to each port of said first storage device to which a volume, of which said port is utilized for an access, is assigned, and updates said second management table that said second storage device has (Ofek: see figures 1 & 2 and column 4 lines 38-64: data map/table contains parameters that maps the new data storage system to the old data storage system).

16. Regarding claim 7, Ofek teaches wherein in case that said host computer has a plurality of paths which are used for an access to the same volume, a process of said fourth step to the volume is carried out at least twice separately to said plurality of paths (Ofek: see figures 1 and 5).

17. Regarding claim 8, Ofek teaches wherein said second network is different from said first network (Ofek: see figures 1 and 5).

18. Regarding claim 9, Ofek teaches obtaining unit which obtains access restriction information and information of a volume which are set up on each port that a first storage device has, and attribute information including a port type and a status of utilization of each port that a second storage device has, through a second network (Ofek: see figure 1 items 12, 24 and 14: host requests access to old data storage system through new data storage system); selecting unit which selects a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained in said obtaining unit (Ofek: see figure 2 and column 4 lines 38-64: data map/table contains parameters that maps the new data storage system to the old data storage system); and setting unit which sets up, on a port

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of said second storage device which is selected in said selecting unit, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained in said obtaining unit (Ofek: see figure 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

19. Regarding claim 10, Ofek teaches obtaining unit which obtains access restriction information and information of a volume which are set up on each port that said first storage device has, and attribute information including a port type and a status of utilization of each port that said second storage device has, through a second network (Ofek: see figure 1 items 12, 24 and 14: host requests access to old data storage system through new data storage system); selecting unit which selects a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained in said obtaining unit (Ofek: see figure 2 and column 4 lines 38-64: data map/table contains parameters that maps the new data storage system to the old data storage system); and setting unit which sets up, on a port of said second storage device which is selected in said selection unit, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are

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obtained in said obtaining unit (Ofek: see figure 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

20. Regarding claim 11, Ofek teaches a first step for obtaining access restriction information and information of a volume which are set up on each port that a first storage device has, through a second network (Ofek: see figure 1 items 12, 24 and 14: host requests access to old data storage system through new data storage system); a second step for obtaining attribute information including a port type and a status of utilization of each port that a second storage device has, from said second storage device through said second network (Ofek: see figure 2 and column 4 lines 38-64: data map/table contains parameters that maps the new data storage system to the old data storage system); a third step for selecting a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained in said second step (Ofek: see figure 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46); and a fourth step for setting up, on a port of said second storage device which is selected in said third step, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained in said first step (Ofek: see figure 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

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21. Regarding claim 12, Ofek teaches wherein said access restriction information setting device obtains access restriction information and information of a volume which are set up on each port that a first storage device has, through said second network, obtains attribute information including a port type and a status of utilization of each port that said second storage device has, from said second storage device through said second network, selects a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained as above, and sets up, on a port of said second storage device which is selected as above, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained as above (Ofek: see figures 1 & 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

22. Regarding claim 13, Ofek teaches a network I/F unit which is utilized for connecting to said second network, and a calculation unit, wherein, said calculation unit obtains access restriction information and information of a volume which are set up on each port that a first storage device has, from said first storage device and attribute information including a port type and a status of utilization of each port that the second storage device has, from said second storage device, through said network I/F unit, selects a port or said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each

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port that said second storage device has, which is obtained as above, and sets up, on a port of said second storage device which is selected as above, through said network I/F unit, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained as above (Ofek: see figures 1-5 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

23. Regarding claim 14, Ofek teaches said access restriction information setting apparatus has a network I/F unit which is utilized for connecting to said second network, and a calculation unit, and said calculation unit obtains access restriction information and information of a volume which are set up on each port that a first storage device has, and attribute information including a port type and a status of utilization of each port that a second storage device has, from said second storage device, through said network I/F unit, selects a port of said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port that said second storage device has, which is obtained as above, and sets up, on a port of said second storage device which is selected as above, through said network I/F unit, access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port that said first storage device has, which are obtained as above (Ofek: see figures 1-5 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

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24. Regarding claim 15, Ofek teaches said first and second storage devices and said management server, wherein said first and second storage devices have a FC I/F which connects to said Fibre Channel switch, and said management server has a LAN I/F unit which is utilized for connecting to said LAN, and a calculation unit, and said calculation unit obtains access restriction information and information of a volume which are set up on each port of the FC I/F that a first storage device has from said first storage device, and attribute information including a port type and a status of utilization of each port of the FC I/F that the second storage device has, from said second storage device, through said LAN I/F unit, selects a port of a FC I/F on said second storage device which is utilized for an access to a volume that said first storage device has or had, on the basis of attribute information of each port of the FC I/F that said second storage device has, which is obtained as above, and sets up, on a port of the FC I/F of said second storage device which is selected as above through said LAN I/F unit, access restriction information of a port of the FC I/F of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the basis of access restriction information and information of a volume of each port of the FC I/F that said first storage device has, which are obtained as above (Ofek: see figures 1-5 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

25. Regarding claim 16, Ofek teaches wherein said calculation unit obtains the access restriction information and the information of the volume which are set up on each port that said first storage device has, from said first storage device, through said second network, selects, as the port of the second storage, a target port which is

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utilized for receiving an access request from said host computer to a volume that said first storage device has, and an initiator port which is utilized for sending an access request from said second storage device to a volume that said first storage device has, and sets up access restriction information of a port of said first storage device to which a volume, of which the port is utilized for an access, is assigned, on the selected target port of the second storage device, and in addition, updates access restriction information of a port of said first storage device to which the volume is assigned so as to permit an access request only from the selected initiator port of said second storage device (Ofek: see figures 1 & 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

26. Regarding claim 17, Ofek teaches wherein said calculation unit specifies access restriction information which is set up on each port that said first storage device has and information of a volume, by obtaining a port of said host computer which is utilized for an access to a volume that said first storage device has and information of a port of said first storage device, from said host computer through said second network (Ofek: see figure 1 items 12, 24 and 14 and figure 2: host requests access to old data storage system through new data storage system).

27. Regarding claim 18, Ofek teaches wherein said calculation unit changes a port or said first storage device which is associated with each mount point of a file system of said host computer and a volume which is assigned to the port, to a port of said second storage device which is utilized for an access to the volume and a volume which is

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defined on the port (Ofek: see figures 1 & 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

28. Regarding claim 19, Ofek teaches wherein said first storage device sets up access restriction information on each port, by use of a first management table on which an information identifier of a volume and a source port of an access to be permitted are listed with a LUN unit with respect to each port, and said second storage device sets up access restriction information on each port, by use of a second management table on which a LUN and an identifier of a volume are listed with a group unit of source ports of an access to be permitted with respect to each port, and said calculation unit obtains said first management table, and prepares said second management table as to each port of said second storage device which is selected as above, on the basis of a listed content of said first management table and updates said second management table which said second storage device has (Ofek: see figures 1 & 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

29. Regarding claim 20, Ofek teaches wherein in case that said host computer has a plurality of paths which are used for an access to the same volume, a process of setting up said access restriction information to a volume is carried out at least twice separately to said plurality of paths (Ofek: see figures 1 & 2 and column 4 lines 38-64 and column 5 lines 45-55 and column 6 lines 14-46).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Doan whose telephone number is (571) 272-0740. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Trang Doan
Examiner
Art Unit 2131

T.D.
September 29, 2006


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